

MEL'NIKOV, I.S., kand.tekhn.nauk

The problem of studying heat and mass exchange on the surface  
of exterior elements. Trudy NIISF no.1:5-17 '62. (MIRA 15:11)  
(Heat--Transmission) (Mass transfer)

DATE: N.Y.C.

Use of slave labor for the construction of the railroads.  
 1864-1865 1866-1867 1868-1869 1870-1871 1872-1873 1874-1875 1876-1877 1878-1879 1880-1881 1882-1883 1884-1885 1886-1887 1888-1889 1890-1891 1892-1893 1894-1895 1896-1897 1898-1899 1900-1901 1902-1903 1904-1905 1906-1907 1908-1909 1910-1911 1912-1913 1914-1915 1916-1917 1918-1919 1920-1921 1922-1923 1924-1925 1926-1927 1928-1929 1930-1931 1932-1933 1934-1935 1936-1937 1938-1939 1940-1941 1942-1943 1944-1945 1946-1947 1948-1949 1950-1951 1952-1953 1954-1955 1956-1957 1958-1959 1960-1961 1962-1963 1964-1965 1966-1967 1968-1969 1970-1971 1972-1973 1974-1975 1976-1977 1978-1979 1980-1981 1982-1983 1984-1985 1986-1987 1988-1989 1990-1991 1992-1993 1994-1995 1996-1997 1998-1999 2000-2001 2002-2003 2004-2005 2006-2007 2008-2009 2010-2011 2012-2013 2014-2015 2016-2017 2018-2019 2020-2021 2022-2023 2024-2025 2026-2027 2028-2029 2030-2031 2032-2033 2034-2035 2036-2037 2038-2039 2040-2041 2042-2043 2044-2045 2046-2047 2048-2049 2050-2051 2052-2053 2054-2055 2056-2057 2058-2059 2060-2061 2062-2063 2064-2065 2066-2067 2068-2069 2070-2071 2072-2073 2074-2075 2076-2077 2078-2079 2080-2081 2082-2083 2084-2085 2086-2087 2088-2089 2090-2091 2092-2093 2094-2095 2096-2097 2098-2099 2100-2101 2102-2103 2104-2105 2106-2107 2108-2109 2110-2111 2112-2113 2114-2115 2116-2117 2118-2119 2120-2121 2122-2123 2124-2125 2126-2127 2128-2129 2130-2131 2132-2133 2134-2135 2136-2137 2138-2139 2140-2141 2142-2143 2144-2145 2146-2147 2148-2149 2150-2151 2152-2153 2154-2155 2156-2157 2158-2159 2160-2161 2162-2163 2164-2165 2166-2167 2168-2169 2170-2171 2172-2173 2174-2175 2176-2177 2178-2179 2180-2181 2182-2183 2184-2185 2186-2187 2188-2189 2190-2191 2192-2193 2194-2195 2196-2197 2198-2199 2200-2201 2202-2203 2204-2205 2206-2207 2208-2209 2210-2211 2212-2213 2214-2215 2216-2217 2218-2219 2220-2221 2222-2223 2224-2225 2226-2227 2228-2229 2230-2231 2232-2233 2234-2235 2236-2237 2238-2239 2240-2241 2242-2243 2244-2245 2246-2247 2248-2249 2250-2251 2252-2253 2254-2255 2256-2257 2258-2259 2260-2261 2262-2263 2264-2265 2266-2267 2268-2269 2270-2271 2272-2273 2274-2275 2276-2277 2278-2279 2280-2281 2282-2283 2284-2285 2286-2287 2288-2289 2290-2291 2292-2293 2294-2295 2296-2297 2298-2299 2300-2301 2302-2303 2304-2305 2306-2307 2308-2309 2310-2311 2312-2313 2314-2315 2316-2317 2318-2319 2320-2321 2322-2323 2324-2325 2326-2327 2328-2329 2330-2331 2332-2333 2334-2335 2336-2337 2338-2339 2340-2341 2342-2343 2344-2345 2346-2347 2348-2349 2350-2351 2352-2353 2354-2355 2356-2357 2358-2359 2360-2361 2362-2363 2364-2365 2366-2367 2368-2369 2370-2371 2372-2373 2374-2375 2376-2377 2378-2379 2380-2381 2382-2383 2384-2385 2386-2387 2388-2389 2390-2391 2392-2393 2394-2395 2396-2397 2398-2399 2400-2401 2402-2403 2404-2405 2406-2407 2408-2409 2410-2411 2412-2413 2414-2415 2416-2417 2418-2419 2420-2421 2422-2423 2424-2425 2426-2427 2428-2429 2430-2431 2432-2433 2434-2435 2436-2437 2438-2439 2440-2441 2442-2443 2444-2445 2446-2447 2448-2449 2450-2451 2452-2453 2454-2455 2456-2457 2458-2459 2460-2461 2462-2463 2464-2465 2466-2467 2468-2469 2470-2471 2472-2473 2474-2475 2476-2477 2478-2479 2480-2481 2482-2483 2484-2485 2486-2487 2488-2489 2490-2491 2492-2493 2494-2495 2496-2497 2498-2499 2500-2501 2502-2503 2504-2505 2506-2507 2508-2509 2510-2511 2512-2513 2514-2515 2516-2517 2518-2519 2520-2521 2522-2523 2524-2525 2526-2527 2528-2529 2530-2531 2532-2533 2534-2535 2536-2537 2538-2539 2540-2541 2542-2543 2544-2545 2546-2547 2548-2549 2550-2551 2552-2553 2554-2555 2556-2557 2558-2559 2560-2561 2562-2563 2564-2565 2566-2567 2568-2569 2570-2571 2572-2573 2574-2575 2576-2577 2578-2579 2580-2581 2582-2583 2584-2585 2586-2587 2588-2589 2590-2591 2592-2593 2594-2595 2596-2597 2598-2599 2600-2601 2602-2603 2604-2605 2606-2607 2608-2609 2610-2611 2612-2613 2614-2615 2616-2617 2618-2619 2620-2621 2622-2623 2624-2625 2626-2627 2628-2629 2630-2631 2632-2633 2634-2635 2636-2637 2638-2639 2640-2641 2642-2643 2644-2645 2646-2647 2648-2649 2650-2651 2652-2653 2654-2655 2656-2657 2658-2659 2660-2661 2662-2663 2664-2665 2666-2667 2668-2669 2670-2671 2672-2673 2674-2675 2676-2677 2678-26

MR. D. 7

MEL'NIKOV, I.S., gornyy inzh.

"Zernogramulit" instead of ammonites. Gor. zhur. no.8:72 Ag '63.  
(MIRA 16:9)

1. Novo-Kiyevskiy rudnik, Yuzhno-Ural'skiy sovet narodnogo khozyaystva.  
(Explosives)

MEL'NIKOV, I.S., gosyuz inzh.

Hole blasting in the presence of a buffer vol. of blown up  
ores. Gor. zhur. no. 1105 N 163. (MIRA 17:6)

1. Novo-Kiyevskiy rudnik, Orenburgskaya obl.

MEL'NIKOV, I.S., born 1924.

Portable railroad buffer stop. Gor.zhar. no. 8:75 Ag '65.

(MIRA 18:10)

MEL'NIKOV, I.V.

Battery powered electrical device for illuminating the wind vane.  
Meteor. i gidrol. no.12:45-46 D '56. (MIRA 10:1)  
(Anemometer)

MEL'NIKOV, I.V.

Soil augers of a new design. Trudy NIIGMP no.7:110-115 '59.  
(MIRA 13:5)

(Augers)

S/081/62/000/002/024/107  
B151/B108

AUTHOR: Mel'nikov, I. V.

TITLE: Some characteristics of the formation of different generations of pitchblende

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 127, abstract 2G123 (Geol. rudn. mestorozhd., no. 3, 1961, 28 - 37)

TEXT: U-mineralization is concentrated mainly within the limits of the block of grano-sienitic porphyry and quartzitic porphyry embedded in deposits of andesitic porphyry. The rocks forming the ore-bearing areas have undergone transition and are penetrated by a dense network of cracks containing veins and streaks of various compositions. 4 types of streaks are distinguished, according to their mineralogical composition. From the interrelations of these streaks three stages of mineralization can be seen: the ankerite-sulfide, pitchblende, and barite-fluorite-calcite stages. In the middle stage, from the dimensions of the deposits, their structure and their paragenetic associations, three generations of pitchblende can be distinguished. Each of them, moreover, is characterized by the value of the

Card 1/2

Some characteristics of ...

S/081/62/000/002/024/107  
B151/B108

oxygen coefficient and the composition of the admixed materials. The separation of the first two generations took place from alkaline solutions in equilibrium with  $\text{Fe}^{2+}$  sulfides and parankerite saturated with U and Mo. The third generation blende was precipitated from more alkaline solutions, less rich in  $\text{S}^{2-}$ ,  $\text{Fe}^{2+}$ , and U, which led to the substitution of the sulfides of the early stages and incongruent dissolution of the parankerite.  $\text{Fe}^{2+}$  and the  $\text{Ca}^{2+}$  were bound where they were, as chlorite and calcite while  $\text{Mg}^{2+}$  went into solution. [Abstracter's note: Complete translation]

Card 2/2

DEMENT'YEV, V.A., kand.tekhn.nauk; OSHANIN, D.A., kand.pedagog.nauk;  
VENDA, V.F., inzh.; GROUNDON, R.R., inzh.; MEL'NIKOV, I.V., inzh.;  
NECHAYEV, B.Ya., inzh.; RYBACHEV, N.V., inzh.; SMIGEL'SKIY, S.Ya.,  
inzh.; STEPANOV, V.I., inzh.; TIMOFEYEV, V.A., inzh.; SHIROCHENSKIY,  
V.I., inzh.

Control of the operation of an overall automatic block. Mekh.  
i avtom.proizv. 19 no.2:47-52 F '65.

(MIRA 18:3)

MEL'NIKOV, K.A., inzh.

Metallic supports do not withstand the load when subjected to  
a one-sided pressure. Ugol' Ukr. 3 no.11:45 H '59. (MIRA 13:3)

(Donets Basin--Mine timbering)

MEL'NIKOV, K.A., inzh.; KOPALEYSHVILI, A.K., inzh.

Three cycles per day with the UKR-1 cutter-loader. Ugol' Ukr.  
5 no.4:32-33 Ap '61. (MIRA 14:4)

1. Kombinat Stalinugol' (for Mel'nikov). 2. Shakhta No.8-a im.  
Stalina tresta Kalininugol' (for Kopaleyshvili).  
(Coal mining machinery)  
(Coal mines and mining---Labor productivity)

MAKNIKOV, K.M., aspirant

Treatment of fracture of the lower limb with the use of  
quick-setting plaster. Trudy Vsesoyuznogo nauchno issledovatel'skogo  
instituta khirurgii imeni N.I. Pirogovskogo, 1961, 100R, 207

MEL'NIKOV, K.A. (Donetsk); YAKOVENKO, G.D. (Donetsk); UTKIN, I.S.

Making 1,421 m. of mine workings in one month with the use of  
the PK-3m cutter-loader. Ugol' 40 no.12:11-14 D '65.  
(MIRA 18:12)

1. Shakhta No.40 "Kurakhovka" tresta Selidovugol'.

SINITSYN, A.I., inzh.; MEL'NIKOV, K.M., inzh.

Resistance welding machine with a wedge-type pneumatic drive for  
flash and upset welding. Svar. proizv. no.8:35-36 Ag '64.  
(MIRA 17:9)

1. Ural'skiy avtomobil'nyy zavod.

ANDRONOV, M.A.; MEL'NIKOV, K.M.

Chromatographic method of sugar refining by the removal of  
mineral impurities and acidity as exemplified by arabinose.  
Trudy IREA no.25:493-500 '63. (MIRA 18:6)

MEL'NIKOV, K. P.

USSR/Scientific Organization - Moscow University prizes

FD-1215

Card 1/1 Pub. 129-18/19

Author : Mel'nikov, K. P.

Title : Life of Moscow University. Outcome of the contest for the best scientific student's work

Periodical : Vest. Mos. un., Ser. fizikomat. 1 yest. nauk, 9, No 5, 169-170 Aug 1954

Abstract : The scientific councils of the various faculties submitted 40 works in competition, held February to March 1954. Works judged the best by the university council were: "Program of the complex mapping of the kolkhoz Kalinin in the scale 1:10000," by A. V. Il'in, student of the Geographic Faculty; and "Economico-Philosophical Writings of Marx (1844)," by L. N. Pazhitnov, student of the Philosophical Faculty. Honorable mention was given to: "Certain problems of large elastic-plastic deformations," V. A. Lomakin; in the Mechanico-Mathematical Faculty, "Hilbert's 30th Problem," A. G. Vitushkin. In the Physical Faculty, "Development of the electron-optic method of representing magnetic inhomogeneities," I. S. Sbitnikova; "Fabry-Perot standard with dielectric mirrors," V. V. Sukhanovskiy. In the Geological Faculty, "Tectonics of the western part of Sarysu-Teniz water-divide and the problem of the cross-section of foldings," Yu. A. Zaytsev.

MEL'NIKOV, K.P.

Method for simulating a telephone load using universal digital computers.  
Sbor. trud. NIITG no.11:72-88 '63. (MIRA 17:9)

BEKAREVICH, A.N. (Gomel'); BERESLAVSKIY, M.D. (Uzhgorod); GROMOV, A.P. (Melekess);  
DUBINCHUK, Ye.S.; TESLENKO, I.F. (Kiyev); ZOLOTOVITSKIY, Ye.M. (Reutovo);  
KAZHDAN, B.I. (Leningrad); KLIMENCHENKO, D.V. (Berdiansk); MEL'NIKOV,  
K.S. (Sterlitamak); MIKHAYLOV, K.F. (Magnitogorsk); MASYROV, A.Z. (Sterl-  
itamak); NEFEDOV, D.I. (Moskva); NOVOSELOV, S.I. (Moskva); PRAVILOV, B.R.  
(s. Kanino Ryazanskoy obl.); PRINTSEV, N.A. (Kursk); SEMENOVICH, A.F.  
(Sverdlovsk)

Discussion of the plans for the programs. Mat. v shkole no.6:5-28  
N-D '59. (MIRA 13:3)

(Mathematics--Study and teaching)

MEL'NIKOV, K.S.; BIKTYASHEVA, L.Z. (Sterlitamak)

Some shortcomings in the students' knowledge of mathematics and  
the possible ways of their elimination. Mat.v shkode no.5:12-  
18 S-O '62. (MIRA 15:12)

(Mathematics—Study and teaching)

CELIKOV, L.

Heat effectiveness of thermal shield surfaces of section of a vertical furnace of low-power boiler. In *Isk. i izn.*, p. 19.

LATVIAN SSR AKADEMIJA. *Latvian. Izv.*, 1971, no. 3, p. 5.

Monthly List of Eastern European Acquisitions. (EAI) IC, Vol. 9, no. 1, Feb. 1973 Encl.

MEL'NIKOV, L.

ZEMLYAK, Yu. (g. Kishinev); MEL'NIKOV, L. (g. Kishinev).

Experimental machine shops. Prom.koop. no.4:24-25 Ap '57.  
(MIRA 10:7)

1. Nachal'nik proizvodstvenno-tehnicheskogo otdela Moldprom-  
soveta (for Zemlyak).
2. Nachal'nik konstruktorskogo byuro (for Mel'nikov).  
(Machine shops)

MELINOV, L.

Construction in the coal mining industry should parallel new tasks.

p. 28

MINNO DELO. Vol. 10, No. 6 Nov./Dec. 1955

Sofiya, Bulgaria

So. East European Accessions List

Vol. 5, No.9

September, 1956

MELODIK, V. G.

The BSHP-1 apparatus for simultaneous lateral pruning of the  
plant rows. (Patent) Ser. Kuznetsov, 12.1.1971, 1971.

1. Grazinskaya, N. I. (pylyatelnaya stantsiya  
(via machinery) (Pruning)

ANDREYEV, V.I.; MEL'NIKOV, L.A.

Magnetic logging device for measuring the susceptibility of  
rocks and ores. Sbor.luch.rats.predl. pt. 2:38-45 '63.  
(MIRA 17:5)

1. Severo-Kazakhstanskoye geologicheskoye upravleniye.

AID P - 5270

Subject : USSR/Engineering

Card 1/1 Pub. 107-a - 6/18

Authors : Mel'nikov, L. A., Eng. and Z. L. Klimovitskiy, Eng.  
(Bryansk Locomotive Works)

Title : Automatic welding of diaphragms for steam turbines.

Periodical : Svar. proizv., 9, 19-21, S 1956

Abstract : The authors outline the technique of automatic welding of diaphragms for steam turbines, and describe the automatic welder installation specially made for the purpose at the Bryansk Locomotive Works. Four drawings, 3 photos and a GOST standard.

Institution : As above

Submitted : No date

MEL'NIKOV, L.A.

KLIMOVITSKIY, Z.L., inzh.; MEL'NIKOV, L.A. inzh.; YASHUTKIN, G.F., inzh.

Automatic welding of steam turbine diaphragms in a protective atmosphere of carbon dioxide. Svar.proizv. no.11:46-49, 3 of cover N '57. (MIRA 10:12)

1. Bryanskiy mashinostroitel'nyy zavod.  
(Steam turbines--Welding) (Protective atmospheres)

MEL'NIKOV, L.A., inzh.

Use of automatic welding for the assembly of cement kilns.  
Svar. proizv. no. 7:32-33 '58. (MIRA 11:7)

1. Bryanskiy mashinostroitel'nyy zavod.  
(Electric welding)  
(Kilns, Rotary--Welding)

AUTHOR: Mel'nikov, L.A., Engineer

135-58-7-10/20

TITLE: The Use of Automatic Welding in Assembling a Cement Kiln  
(Primeneniye avtomaticheskoy svarki pri montazhe tsementnoy pechi)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 7, pp 32-33 (USSR)

ABSTRACT: Experiences made in automatic welding of cement kiln assembly at the Bryanskiy tsementnyy zavod (Bryansk Cement Plant) are described. Z.L. Klimovitskiy and N.A. Vituykov participated in the work. A tubular cement kiln of 150 m length and 3,600 mm diameter was assembled with the use of automatic welding on a roller stand (Fig. 1) on which the kiln section was rotated during the welding process by a gantry crane. The welding operation is described in detail, including preparation of butt edges, electric parameters of the process, and measures taken to prevent rust formation on the first layers of welded metal, prior to welding the upper beads. The work time is considerably reduced by automatic welding. All cement kilns now under construction can be successfully assembled by the described method. There are 6 diagrams and 1 Soviet reference.

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The Use of Automatic Welding in Assembling a Cement Kiln

145-58-7-10/20

ASSOCIATION: Bryanskiy mashinostroitel'nyy zavod (The Bryansk Machinebuilding Plant)

1. Arc welding--Applications

Card 2/2

L1883

S/135/62/000/011/003/006  
A006/A101

1.2240  
1 1690  
AUTHOR:

Mel'nikov, L. A., Engineer

TITLE: Some problems in welding metal powders

PERIODICAL: Svarochnoye proizvodstvo, no. 11, 1962, 13 - 15

TEXT: The welding of metal powders was investigated on contact machines MTP-150 (MTP-150) and MШП-150 (MShP-150). The powder was placed in a die and pressed with a punch. The welding current was induced and the powder was heated to a temperature depending on the welding conditions. By varying the pressure, current, and time of welding, powders of up to 100% density can be welded. It was found that the following materials can be welded to each other or metal surfaces: iron powders of various granulation; tungsten, nickel, tin, lead, titanium, aluminum powders and ferroalloy powders (ferrotitanium, ferrovanadium, ferrotungsten, ferrochromium etc). One of the most important factors affecting the weldability of powders is their electric resistivity which depends upon specific pressure, granulation, the conditions of the powder surface and the thickness of oxide films, and in particular of the strength of oxide films at high tempera-

Card 1/2

Some problems in welding metal powders

S/135/62/000/011/003/006  
A006/A101

tures. Aluminum, nickel and tungsten powders with strong oxide films are poorly welded. Good weldability is shown by iron powders and powders of its alloys. The satisfactory weldability of iron powder is also explained by changes in the physico-chemical properties of the oxide films as a result of heating. There are 4 figures and 1 table.

ASSOCIATION: Bazovaya laboratoriya svarki, Bryanskiy mashinostroitel'nyy zavod  
(The base welding laboratory at the Bryansk Machinebuilding Plant)

Card 2/2

ACCESSION NR: AP4039605

S/0126/64/017/005/0769/0772

AUTHORS: Mel'nikov, L. A.; Sokolov, B. K.; Stregulin, A. I.

TITLE: High pressure effect on ShKh15 steel transition during annealing

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 5, 1964, 769-772

TOPIC TAGS: steel transition, annealing, carbon, chromium, magnesium, coercive force, atmospheric pressure, carbide, residual austenite, martensite, steel ShKh15

ABSTRACT: The pressure effect on the transition of steel ShKh15 (containing 1.3% carbon, 1.46% chromium, and 0.3% magnesium) during annealing was studied. A 3-mm. diameter by 25 mm specimen was quenched in NaOH water solution after being vacuum heated to 1000C. Annealing was carried out under 20 000 kg/cm<sup>2</sup> pressures at 75-300C temperatures applied for 30 min. The coercive force  $H_c$  was measured as a function of temperature. The curves showed an identical decay of  $H_c$  under both 20 000 kg/cm<sup>2</sup> and under atmospheric pressures for  $200 \leq T \leq 300C$ . Curves of  $H_c$  versus T after annealing indicate  $\epsilon$ -carbide to  $\gamma$ -carbide transitions activated by the pressure. Measurements of residual austenite indicate that at low annealing temperatures the martensite decay proceeds at the same rate under both high and atmospheric pressures, but the presence of high pressure delays the decay of residual austenite.

Card 1/2

ACCESSION NR: AP4039605

V. P. Katayev participated in this work. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physical Metallurgy AN SSSR)

SUBMITTED: 18Jul63

DATE ACQ: 19Jun64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 004

Card 2/2

MEL'NIKOV, L. A.

Mel'nikov, L. A.

"The Serodiagnosis and Comparative Immunology of Vesicular Eickettsiosis."  
Acad Med Sci USSR. Moscow, 1955. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', No. 27, 2 July 1955

EXCERPTA MEDICA Sec 4 Vol. 10/10 Microbiology Oct 57

2380. MELNIKOV L. A. Inst. of Epidemiol. and Microbiol. N. F. Gamaleya of the Acad. of Med. Sci., USSR, Moscow. \*Serological diagnosis of vesicular rickettsiosis VOP. VIRUS 1956, 5 (29-33) Tables 1 illus. 3 (Russian text)

Data on the serological diagnosis of vesicular rickettsiosis are discussed. This is a new disease in the USSR, probably identical to the so-called 'rickettsial pox' detected in Sta. With the aid of the complement-binding reaction the serum of 162 patients and convalescents was examined. The serum of patients suffering from other diseases and that of healthy persons was used as a control. In patients suffering from vesicular rickettsiosis, examined three times, a 2-16-fold increase of antibodies against the specific antigen was observed. In patients and those who had recovered the titres of antibodies varied from 1:5 to 1:80 - more rarely from 1:160-1:320. In the serum of patients suffering from vesicular rickettsiosis, however, the complement-binding antibodies against *R. prowazeki*, *R. conori* and *R. sibiricus* were always found with low titres. In those of these patients who had previously suffered from typhus an 'anamnestic' increase of titres towards *R. prowazeki* was observed. In such cases diagnosis was based on serological, clinical and epidemiological data. The Weil-Felix reaction (OX<sub>19</sub>) was useless in the serodiagnosis of vesicular rickettsiosis. References 7.

Chakhova - Moscow

MEL'NIKOV, I. A.

Serological diagnosis of rickettsial diseases of the typhus and tick-borne spotted fever group by the hemagglutination method. Report No.1: Technic for preparing antigen and conducting the test [with summary in English] Vop. virus. 2 no.1:17-22 Ja-F '57 (MLRA 10:5)

1. Otdel sypnogo tifa i drugikh rikketsiozov Instituta epidemiologii i mikrobiologii imeni pochetnogo akademika N.F. Gamalei AN SSSR, Moskva.

(TYPHUS, diag.

hemagglutination test, prep. of antigen & technic) (Rus)

(ROCKY MOUNTAIN SPOTTED FEVER, diag.

same)

MEL'NIKOV, L.A.

Serodiagnosis of rickettsial infections of the type of tick-borne spotted fever and typhus using a hemagglutination reaction. Report No.2: Specificity of the test. Vop.virus. 4  
no.3:268-272 Ky-Je '59. (MIRA 12:8)

1. Otdel sypnogo tifa i drugikh rikketsiozov Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR, Moskva.  
(ROCKY MOUNTAIN SPOTTED FEVER, diag.  
serol. (Rus))  
(TYPHUS, diag.  
same)

MEL'NIKOV, L.A.

Serological diagnosis of rickettsial infections of the typhus fever and tick borne spotted fever group by hemagglutination. Report No.3: Typhus fever. Vop.virus. 4 no.4:495-499 J1-Ag '59. (MIRA 12:12)

1. Otdel sypnogo tifa i drugikh rikketsiozov Instituta epidemiologii i mikrobiologii imeni N.F. Gavalei AMN SSSR, Moskva.  
(TYPHUS, diagnosis)

MEL'NIKOV, L.A.; RAZUMOVA, L.L.; LEMAZHIKHIN, B.K.

Mechanisms of muscle contraction (based on X-ray data). Dokl.  
AN SSSR 151 no.4:955-958 Ag '63. (MIRA 16:8)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent  
AN SSSR (for Frank).

(MUSCLES—MOTILITY)

RAZUMOVA, L.L.; LEMACH CHIN, B.K.; MEL'NIKOV, V.I.; FRANK, G.M.

X-ray study of structural reconstructions in a striated muscle following changes in its length. Dokl. AN SSSR 157 no.3:688-691 J1 '64. (MIRA 17:7)

1. Chlen-korrespondent AN SSSR (for Frank).

CHUMPOVA, T.S.; SEMAZHICHIN, I.A.; [unclear]

X-ray identification of L-mercapto-L-homocysteine structure.  
Biofizika 9 no. 1:136-137 1964. (NDA 17:7)

1. Institut biologicheskoy fiziki. N ., Moskva.

RAZUMOVA, L.L.; MEL'NIKOV, L.A.; LEMAZHIKHIN, B.K.; FRANK, G.M.

Shortening glycerinated muscles with a damaged two-dimensional  
lattice of filaments. Biofizika 10 no.1:194 '65.

(MIRA 18:5)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

STREGULIN, A.I.; MEL'NIKOV, L.A.

Conversions of austenite to martensite under high pressure in a  
magnetometric unit. Zav.lab. no.11:1324-1326 '59. (MIRA 13:4)

1. Institut fiziki metallov Akademii nauk SSSR, g. Sverdlovsk.  
(Austenite) (Martensite)

66229

SOV/126-8-3-13/33

18.7500

AUTHORS: Stregulin, A.I. and Mel'nikov, L.A.  
 TITLE: Transformation of Austenite Into Martensite at High Pressure  
 PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 406-411 (USSR)  
 ABSTRACT: Numerous theoretical calculations (e.g., Ref 1 to 4) and experimental (Ref 5 to 7) work have confirmed the expected effect of pressure on slowing down the gamma  $\rightarrow$  alpha transformation. Although Stregulin and Chuprakova (Ref 8) improved the experimental technique by using all-round pressure, defects remained. The authors describe a magnetometric apparatus (Fig 1) for studying the austenite  $\rightarrow$  martensite transformation at pressures up to 30000 kg/cm<sup>2</sup>. The quantity of magnetic phase is found with the aid of a ballistic mirror galvanometer connected to a measuring coil between the poles of a strong electromagnet in the sides of the high-pressure chamber. This chamber is a cylinder with a 7 to 8 mm diameter aperture. The specimen is placed in a lead or paraffin ampoule in a hole through the poles and coil. Pressure was applied from a hydraulic press. Two austenitic

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SOV/ 126-8-3-13/33

Transformation of Austenite Into Martensite at High Pressure

steels, 7N4G4 and 4N19G were used, their respective compositions (%) being: 0.66, 0.39 C; 4.20, 19.30 Ni; 3.74, 1.00 Mn; 0.22, 0.15 Si; 0.05, - P; 0.03, - S. The test specimens were 4 mm in diameter and 25 mm long; they were homogenized at 1150°C for several hours and then stabilized at 100°C. Specimen temperatures during testing were measured with a chromel alumel couple. Cooling rates for studying the transformation were 2 to 3°C per minute. The same results were obtained for the two steels. Fig 2 shows the % martensite plotted against temperature for 7N4G4 steel at pressures of 1, 5000, 10000, 15000 and 20000 kg/cm<sup>2</sup>. The martensite-point temperature for this steel is plotted against pressure in Fig 3 showing a decrease with increasing pressure. For studying the effect of pressure on the isothermal austenite → martensite transformation, the enclosed specimen was kept at 25000 kg/cm<sup>2</sup> while being cooled to the required temperature, after which the pressure was dropped to the required value. In the first 2 to 3 sec after pressure reduction, transformation was very rapid. After 30 seconds the change became slow enough for magnetometric determination to be effected. Fig 4 shows

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66229

SOV/126-8-3-13/33

Transformation of Austenite into Martensite at High Pressure

% martensite plotted against time for 7N4G4 steel for -160, -120, -93 and -65°C and atmospheric pressure for -150, -120 and -85°C and 10000 kg/cm<sup>2</sup>; the high-pressure curves lie well below those relating to atmospheric pressure. Rejecting the initial portions of curves in Fig 4, the authors obtain isothermal transformation curves: these are given in Fig 5 and 6 for atmospheric pressure and 10000 kg/cm<sup>2</sup>, respectively. To get a truer picture of the kinetics of the transformation, the authors adopt the suggestion of Kurdyumov and Maksimova (Ref 9) and relate the quantity of martensite formed in the isothermal transformation to the maximum quantity formed in the isothermal transformation (not to the total martensite in the specimen). The curves then obtained are shown in Fig 7 (atmosphere) and Fig 8 (10000 kg/cm<sup>2</sup>). Results for 4N19G steel (at 5000 kg/cm<sup>2</sup>) were similar, showing that the isothermal austenite → martensite transformation is slower at elevated pressures. There are 8 figures, 1 table and 9 references, 7 of which are Soviet and 2 Western.

Card 3/4

66229


SOV/126-8-3-13/33

Transformation of Austenite into Martensite at High Pressure

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal  
Physics AS USSR)

SUBMITTED: October 16, 1958

Card 4/4



PHASE I BOOK EXHIBITION

SOV/5511

Nauchno-tekhnicheskoye obshchestvo fiziko-metallurgicheskoy fiziko-khimiya  
Kiyevskoye obshchestvo pravitelstva.

Metallovedeniye i termicheskaya obrabotka (Physical Metallurgy and Heat  
Treatment of Metals) Moscow, Mashgiz, 1961. 336 p. 300,000 copies printed.  
5,000 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy i shtet  
Sovetskoye Ministerstvo Obratsh. Nauchno-tekhnicheskoye obshchestvo  
nashchitirovannoy pravitelstva. Kiyevskoye obshchestvo  
pravitelstva.

Editorial Board: N. P. Kraus, Doctor of Technical Sciences, I. Ya.  
Dokhtyar, Doctor of Technical Sciences, D. A. Bratkov, Doctor of  
Technical Sciences, I. S. Kozlovskiy, Engineer, E. A. Markov-  
skiy, Candidate of Technical Sciences, V. G. Fedakov, Doctor  
of Technical Sciences, and A. V. Chernyshov, Candidate of Tech-  
nical Sciences; Ed.: M. S. Sorokai, Tech. Ed.: N. S.  
Gornataypol'skaya; Chief Ed., Mashgiz (Southern Dept.): V. K.  
Serdyuk, Engineer.

Card 1/10

PURPOSE: This collection of articles is intended for scientific  
workers and technical personnel of research institutes, plants,  
and schools of higher technical education.

COVERAGE: The collection contains papers presented at a convention  
held in Kiyev on problems of physical metallurgy and methods of  
the heat treatment of metals applied in the machine industry.  
Phase transformations in metals and alloys are discussed, and  
results of investigations conducted to ascertain the effect of  
heat treatment on the quality of metal are analyzed. The possi-  
bility of obtaining metals with given mechanical properties is  
discussed, as are problems of steel brittleness. The col-  
lection includes papers dealing with kinetics of transformation,  
heat treatment, and properties of cast iron. No permealities  
are mentioned. Articles are accompanied by references, mostly  
Soviet.

TABLE OF CONTENTS:

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Brusilovskiy, B. A., Engineer, and P. I. Ivanov (Kramatorsk). X-Ray Investigation of the Decomposition Kinetics of Martensite in Tempering at Low Temperature	19
Kocherzhinskii, Yu. A., Candidate of Technical Sciences (Kiyev). Conditions of Formation of Metastable Austenite in Iron-Carbon Alloys	22
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Card 1/10

Mel'nikov, L. A.

AID Nr. 982-6 4 June

EFFECT OF HIGH HYDROSTATIC PRESSURE ON PHASE TRANSFORMATIONS  
IN Fe-Ni ALLOYS (USSR)

Mel'nikov, L. A., B. K. Sokolov, and A. I. Stregulin. Fizika metallov i metallovedeniye, v. 15, no. 3, Mar 1963, 357-361.

S/126/63/015/003/006/025

The effect of hydrostatic pressure on the direct and reverse martensitic transformation in the Fe-Ni alloy containing 0.046% C and 27.6% Ni has been studied by the Institute of the Physics of Metals, Academy of Sciences USSR. Disk-shaped alloy specimens 4.5 mm in diameter and 0.5 mm thick were vacuum annealed at 1150°C for 1 hr and water quenched. It was found that a pressure of 10,000 kg/cm<sup>2</sup> lowers the M<sub>s</sub> temperature to -50°C, compared with 3°C under atmospheric pressure, and reduces the rate of transformation. Under atmospheric pressure 80% of the austenite transforms to martensite between +3° and -20°C. Under 10,000 kg/cm<sup>2</sup> the same percentage transforms between -50° and -100°C. High pressure also lowers the temperature of the beginning of the reverse transformation. At 10,000, 20,000 and 30,000 kg/cm<sup>2</sup> the A<sub>s</sub> temperatures were found to be 435°, 400°, and 360°C, respectively, compared with 465°C under atmospheric pressure. [ND]

Card 1/1

ACCESSION NR: AP4017372

S/0126/64/017/002/0313/0315

AUTHORS: Mel'nikov, L. A.; Sokolov, B. K.; Stregulin, A. I.

TITLE: Plastic deformation effect on the reverse martensite transformation in nickel iron

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 2, 1964, 313-315

TOPIC TAGS: Ni, Fe, nickel iron, plastic deformation, phase transformation, direct transformation, reverse transformation, martensite deformation, austenite deformation, deformation temperature effect, nickel iron deformation

ABSTRACT: The plastic deformation effect of martensite in Ni-iron on the reverse transformation was studied in order to obtain additional information concerning this process. Ingots containing 27.6% Ni and 0.046% carbon, were held at 1200C for 10 hours and were then forged into samples 0.5 mm thick and 4.5 mm in diameter. These samples were vacuum heated to 1150C, held at that temperature for one hour, and cooled in water. The martensite transformation started at 2°, and the reverse transformation (martensite to austenite) at 465C. In order to obtain a maximum quantity of martensite, the samples were cooled in liquid nitrogen. After this

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ACCESSION NR: AP4017372

they were worked in a hydraulic press. It was established that the deformation of martensite at various temperatures affected in different ways the reverse martensite transformation. It caused the formation of austenite when induced at the  $A_H$  temperature (temperature of the beginning of the reverse transformation), and it delayed the transformation when applied at temperatures lower than  $A_H$  (in such cases, it was necessary to heat the samples in order to start the formation of austenite). The plastic deformation had the same effect on the martensite transformation during cooling. Deforming the alloy in the austenite state at temperatures exceeding  $M_H$  (temperature of the beginning of martensite transformation) activated the martensite transformation and increased the temperature of the beginning of martensite formation. This activation effect was weakened by the increase in the deformation temperature and was eventually replaced by slowing down of the martensite transformation (i.e., by the austenite stabilization effect). The authors believe that the results of these experiments justify the assumption that the causes of the plastic deformation effect on direct and on the reverse martensite transformation may be the same. Orig. art. has: 2 figures.

Card 2/3

ACCESSION NR: APL017372

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physical Metallurgy  
AN SSSR)

SUBMITTED: 30Jul63

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 005

OTHER: 002

Card 3/3

MEL'NIKOV, L.A.; VOLOV, B.K.; ST. GILIT, A.V.

Effect of high pressures on transformations during the tempering  
of ShKh15 steel. Fiz. met. i metalloved. 17 no.5:360-772 My '64.  
(MIRA 17:9)

1. Institut fiziki metallov AN SSSR.

L 13998-65 EWT(m)/EPT(c)/EPR/EWP(j) Pc-4/Pr-4/Ps-4 AEDC(a)/SSD/AFWL/AFTC(p)  
 RM/WW  
 ACCESSION NR: AP4946478 8/0032/64/030/010/1284/1284

AUTHOR: Mel'nikov, L. A.; Sokolov, B. K.; Stregulin, A. I.

TITLE: High-pressure chamber for the study of phase transfer

SOURCE: Zavodskaya laboratoriya, v. 30, no. 10, 1964, 1284

TOPIC TAGS: hydrostatic pressure, ultrahigh pressure, steel treatment

ABSTRACT: A high-pressure chamber has been designed in which steel specimens can be heated up to 400C under hydrostatic pressures up to 30,000 kg/cm<sup>2</sup>. The chamber (see Fig. 1 of the Enclosure) consists of heavy steel housing 6, with nephrite bushing 5, into which steel specimen 1, enclosed in teflon envelope 4, is placed. When the temperature inside the nephrite bushing is raised by heater 2, the teflon melts and serves as a medium for the transfer of the pressure from plungers 7 and 8, which are actuated by a hydraulic press. The temperature of the specimen is measured by thermocouple 2 welded to it. The chamber has successfully withstood over 50 tests in which annealed and quenched steel specimens were tempered at 75—350C under a 23,000 kg/cm<sup>2</sup> pressure. Orig. art. has: 1 figure.

Card 1/3

L 13998-65

ACCESSION NR: AP4046478

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physics  
of Metals, AN SSSR)

SUBMITTED: 00

ENCL: 01

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3137

Card 2/3

L 13998-65

ACCESSION NR: AP4046478

ENCLOSURE: 01

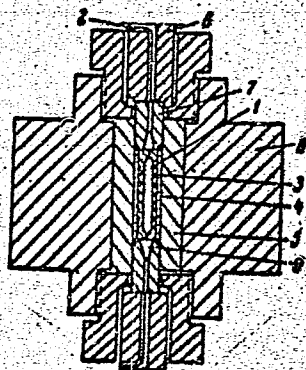


Fig. 1. Design of high-pressure chamber

Card 3/3

AL'TSHULER, Z.Ye., inzh.; BASTUNSKIY, M.A., inzh.; BERSTEL', V.N., inzh.;  
 BIRENBERG, I.E., inzh.; BOGOPOLSKIY, B.Kh., inzh.; BUKHARIN, S.I.,  
 inzh.; GERSHTEYN, B.G., inzh.; GRINSHPUN, L.V., inzh.; DREYER, G.I.,  
 inzh.; DINERSHTEYN, A.G., inzh.; ZLATOPOL'SKIY, D.S., inzh.; KLANYUK,  
 A.V., inzh.; KOZIN, Yu.V., inzh.; LEVITIN, I.P., inzh.; MEL'NIKOV,  
 L.F., inzh.; MEL'KUMOV, L.G., inzh.; NADEL', M.B., inzh.; PAVLOV,  
 N.A., inzh.; PASLEN, D.A., inzh.; PESIN, B.Ya., inzh.; PYATKOVSKIY,  
 P.I., inzh.; RAZNOSCHIKOV, D.V., inzh.; ROZENoyer, G.Ya., inzh.;  
 ROZENBERG, R.L., inzh.; ROYTENBERG, N.L., inzh.; RYABINSKIY, Ya.I.,  
 inzh.; SYPCHENKO, I.I., inzh.; TABACHNIKOV, L.D., inzh.; FEL'DMAN,  
 E.S., inzh.; SHTRAKHMAN, G.Ya., inzh.; SHTERENGAS, N.S., inzh.;  
 LEVITIN, I.P., otvetstvennyy red.; STEL'MAKH, A.N., red.izd-va;  
 BEKKER, O.G., tekhn.red.

[Overall mechanization and automatization of production processes in  
 the coal industry] Kompleksnaya mekhanizatsiya i avtomatizatsiya  
 proizvodstvennykh protsessov v ugol'noi promyshlennosti. Pod red.  
 I.U.V.Kozina i dr. Moskva, Ugletekhizdat, 1957. 82 p. (MIRA 11:3)

1. Gosudarstvennyy proyektno-konstruktorskiy institut. 2. Institut  
 Giprougleavtomatizatsiya i Tekhnicheskogo Upravleniya Ministerstva  
 ugol'noy promyshlennosti (for all except: Levitin, Stel'makh,  
 Bekker)

(Automatic control) (Coal mining machinery)

YACHENKO, V.N.; MELNIKOVA, L.I.; MELNIKOVA, L.I.

Polymerization of acrylate in electric discharge. Ind.   
 KF VNIIEP. 8.102.104. 1971. (MIRA 17.5.

S/001/63/000/003/027/036  
B144/B186

AUTHORS: Zaychenko, V. N., Mel'nikov, L. F., Yemel'yanova, G. V.

TITLE: Electric-discharge polymerization of ethylene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1963, 586, abstract  
3T24 (Tr. Krasnodarsk. fil. Vses. neftegaz. n.-i. in-ta,  
no. 8, 1962, 102-109)

TEXT: The possibility is studied for obtaining solid polyethylene under the effect of an electric discharge in vacuo (5 - 50 mm Hg).. It is shown that using a cylindrical glass capacitor with a non-isolated central metal electrode as reaction vessel, a polymer (90 - 97%) forms on the electrodes in the form of a transparent or dull white film which under prolonged action of the discharge becomes brittle, loses its solubility, and darkens. Simultaneously hydrogen and saturated and nonsaturated hydrocarbons form. The effect is studied of initiating additions (saturated and aromatic hydrocarbons) and gaseous products forming in the electronic discharge on the process of ethylene polymerization (inhibition of the process). It is shown that in the Card 1/2

Electric-discharge polymerization of ...

S/081/63/000/003/027/036  
B144/B186

polymerization of ethylene in hydrocarbon solvent it is mainly the  
solvent that is polymerized. [Abstractor's note: Complete translation.]

Card 2/2

KHRUSHCHEV, N.S.; KAGANOVICH, L.M.; SHVERNIK, N.M.; PERVUKHIN, M.G.; ZASYAD'KO, A.F.  
TEVOSYAN, I.F.; MALYSHEV, V.A.; BAYBAKOV, N.K.; BESHCHEV, B.P.; KUZ'MICH, A.S.  
~~MEL'NIKOV, L.G.~~; GRAFOV, L.Ye.; ZADEMIDKO, A.N.; MEL'NIKOV, N.V.; LALAYANTS,  
A.M.; KOVALEV, I.V.; POCHENKOV, K.I.; BARABANOV, F.A.; KRASHNIKOVSKIY, G.V.;  
MINDELI, E.O.; ROSSOCHINSKIY, I.Ya.

Egor Trofimovich Abakumov; obituary. Mast.ugl.2 no.11:30 N '53.  
(MLBA 6:11)  
(Abakumov, Egor Trofimovich, 1895-1953)

MELNIKOV, I. G.

Construction of Enterprises of the Coal Mining Industry Based on the  
Level of New Tasks. Minno Delo (Mining). "6:26: Nov-Dec 55

MEL'NIKOV, L.G.

Let us build coal mining enterprises up to the level of their  
new tasks. Ugol' 30 no.10:1-5 0 '55. (MIRA 8:12)

1. Ministr stroitel'stva predpriyatiy ugol'noy promyshlennosti  
SSSR

(Coal mines and mining)

MEL'NIKOV, L.G.

Sixth five-year plan for developing coal mining installations.  
Ugol' 31 no.5:1-5 My '56. (MLRA 9:8)

1. Ministr stroitel'stva predpriyatiy ugol'noy promyshlennosti  
SSSR.

(Coal mines and mining)

MEL'NIKOV, L.G.

Speed up the construction of new coal mining enterprises.  
Shakht.stroil. no.1:1-4 Ja '57. (MLBA 10:7)

1. Ministr stoitel'stva predpriyatiy ugol'noy promyshlennosti SSSR.  
(Coal mines and mining)

POLYAKOV, Yu.A.; LEONT'YEV, A.M.; MEL'NIKOV, L.K.

Concerning  $\text{Sr}^{90}$  fallout in the middle latitudes of the U.S.S.R.  
Pochvovedenie no.11:45-50 N '62. (MIRA 16:1)  
(Radioactive fallout) (Strontium--Isotopes)

*Mel'nikov, L. M.*

*18*  
 Determination of hydrogen in steel. *E. T. Kurachkin*  
 and *L. M. Mel'nikov. Izv. Vsesoyuzn. Inst. im. S. M. Kirova* 52, 103-22 (1955). The H content in ferroalloys was detd. by displacement of EtOH in a special buret (diagram shown). The rate of H evolution is an exponential function: 87% of the total H given off in 4 days is liberated during the 1st day and most of that during the first few hrs. In alloys with more than 1% C the residual H is high. This is attributed to the higher sol. of H in austenite, which is formed, than in  $\alpha$ -Fe. After annealing at 1000-1100° for 45 min. in air, the H content in FeMn, FeW, and FeSi (12-75% Si) is reduced many-fold (3-7 times). On the other hand storing the samples in the atm. increases it. Hot extn. at 600-700° in *vacuo* gave reproducible results. The choice of this temp. is explained by the fact that at higher temps., S, O, N and O (as CO) are also given off, and lower temps. do not decrease the vol. of H given off. The presence of an oxide film on the sample, contrary to expectations, does not reduce the vol. of H detd. Thus special precautions in prep. the sample are not necessary. Hot extn. is recommended for plant control for the detn. of H during the process of steel treatment. Displacement in EtOH is suitable for low H content.

*ppB*  
*M.M.*

BUTAKOV, D. K., MELNIKOV, L. M. and BROVDO, M. Ya.

"Investigation of the Vacuum Treatment of Cast Steel for the Cast-Shapes."

paper presented at Second Symposium on the Application of Vacuum Metallurgy.

*Moscow 1-6 July 1966*

MEL'NIKOV, L M.

# НЕМЕТАЛЛИЧЕСКИЕ ВКЛЮЧЕНИЯ СТАЛИ

С.И.Пономев	Очистка горячей стали от тугоплавких включений
Г.Ф.Кочевников	
С.Е.Волов	Влияние метода раскисления стали и содержания шихты на процесс ее дегазации.
А.М.Самарин	
Д.К.Бутачев	Влияние содержания легирующих элементов в структуре легированной стали.
Л.М.Мельников	
С.Т.Ростовцев	Особенности неметаллических включений в конвертерной рваной стали.
Д.И.Туркин	
В.И.Богдановский	
М.С.Прохоров	
В.А.Урюков	Влияние на микрокарбидность стали, содержащей титан
Ю.Т.Лукацкий	
Д.М.Дуванов	Влияние на микрокарбидность стали, содержащей ванадий и молибден.
О.В.Демидов	
Е.В.Круглов	
А.И.Хованов	Особенности раскисления в трансформационной стали.
С.Г.Великов	Разработка и внедрение новой технологии выплавки высоколегированной стали.
П.М.Давыдов	
В.П.Карасев	Возможные пути ускорения раскисления чугуна.
П.Я.Аносов	

report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow-- 30 Jun 1959.

MEL'NIKOV, L.M., inzh.; BABICH, P.P., inzh.; BUDENNYI, V.D., inzh.;  
LIRMAN, A.M., inzh.

Dependence of steel smelting processes on heat transmission in  
open-hearth furnaces. Trudy Ural. politekh. inst. no. 91:47-55 '60.  
(MIRA 14:2)

(Open-hearth process) (Heat--Transmission)

S/137/61/000/011/031/123  
A060/A101

AUTHORS: Butakov, D.K., Mel'nikov, L.M.

TITLE: Improving steel quality by treating it in the ladles with solid fluxes and liquid slags

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 62-63, abstract 11V364 (V sb. "Novoye v teorii i praktike proiz-va martenovsk.stali", Moscow, Metallurgizdat, 1961, 180-192, Discussion 193 - 201)

TEXT: The results are cited of the treatment of alloy steel for castings, using solid fluxes and slags. Carefully dried solid fluxes and slags were fed to the stream in one of the two ladles into which the metal was poured from the same furnace. The metal of the second ladle was reduced according to the usual method. Broken glass in the quantity of 0.9 and 2.4% by weight served as the acid flux. The basic flux was in the form of special slag, 2.1% by weight of the metal, or a mixture of ground materials (44% lime, 26% fluorspar, and 30% calcinated soda) in the quantity of 0.6% by weight of the metal. It was established that the non-metallic impurity and gas content in the steel varies as a function of the quantity of the metals used for the treatment and also of their preparation. Too great

Card 1/2

S/137/61/000/011/031/123  
A060/A101

Improving steel quality ...

additions of solid materials into the ladle cool the metal thus increasing the nonmetallic impurity content. The admixture of solid materials into the ladle between the limits 0.6 - 1.0% by weight of the metal lowers the H content in the steel and improves the structure of the castings. The increase in the H content observed in a number of cases is explained by the adsorption of atmospheric moisture upon the surface of the lumps of added materials. The macrostructure of the steel castings treated with solid fluxes and slags becomes much finer and the zone of acicular dendritic crystals disappears altogether, however without an improvement of the mechanical characteristics of the steel. It is recommended that the method of treating the steel in the ladles with solid fluxes and slags be used to simplify the heat-treatment of castings made of alloy steel.

I. Polyak

[Abstracter's note: Complete translation]

Card 2/2

MEL'NIKOV, L.M.; MEDVEDEVA, G.A.; OLERSKAYA, S.M.; KORCHEMKINA, A.S.;  
BUTAKOV, D.K.; UKSUSNIKOVA, A.A.

Determining the composition of sulfides in steels alloyed with  
nickel and manganese. Zav. lab. 31 no.2:142-146 '65 MIRA 1965

1. Ural'skiy politekhnicheskii institut im. S.M.Kirova.

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

[illegible]

(M... 2...)

MEL'NIKOV, L.V.

PUZANOV, N.P.; MEL'NIKOV, L.V.; PAUL', G.P.; CHERKASSKIY, A.S.; TSVILEV,  
A.S.; YAKOBSON, A., redaktor; MUNTIAN, T., tekhnicheskij redaktor.

[Course for radiotelegraph operators] Kurs radiotelegrafista.  
Moskva, Izd-vo DOSAAF, 1954. 335 p. [Microfilm] (MLRA 7:11)  
(Telegraph, Wireless)

REGIDA, P.; MEL'NIKOV, M.; KUZNETSOV, M.

Producing several types of milled corn products at low-capacity mills.  
Muk.-elev. prom. 28 no.3:15-17 Ag '62. (MIRA 17:2)

1. Vserossiyskoye ob'yedineniye khleboproduktov.

MEL'NIKOV, MIKHAIL ALEKSEEVICH

Mel'nikov, Mikhail Alekseevich Podstawy darwinizmu dla klasy XI. (Przel. z rosyjskiego Halina Jaczewska i Helena Sikorska) Warszawa, Panstwowe Zaklady Wydawn. Szkolnych, 1951. 1<sup>00</sup> p. (The foundations of Darwinism; a textbook for high schools)

SO: Monthly list of East European Accessions, LC, Vol. 3, No. 1, Jan. 1954,  
Uncl.

SOV/139-58-5-3/35

AUTHOR: Mel'nikov, M. A.

TITLE: Investigation of the Pulse Breakdown of Monocrystals of Certain Alkali-Halide Salts and of Polymethylmethacrylate in the Millimicrosecond Region (Issledovaniye impul'snogo proboya monokristallov nekotorykh shchelочно-galoidnykh soley i polimetilmetakrilata v millimikrosekundnom diapazone)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, fizika, 1958, Nr 5, pp 12-15 (USSR)

ABSTRACT: The paper was presented at the Conference of Higher Educational Establishments on Dielectrics and Semiconductors, Tomsk, February, 1958. The author studied breakdown of monocrystals of NaCl, KCl, KBr, and KI of 100  $\mu$  thickness and of polymethylmethacrylate 35  $\mu$  thick. The author applied a uniform field and the duration of application of the field varied from  $10^{-6}$  sec to  $10^{-9}$  sec. Fig.1 shows an oscillogram of breakdown of KBr in  $10^{-9}$  sec. Dependence of the breakdown field on the duration of application of the field is given for NaCl, KCl, KBr, KI in Fig.2. Fig.3 gives the dependence of the time lag

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4155-38-5-5/55

Investigation of the Pulse Breakdown of Monocrystals of Certain Alkali-Halide Salts and of Polymethylmethacrylate in the Millimicro-second Region

$t_z$  on the overvoltage  $\beta$ , where  $\beta$  is the ratio of the applied voltage to the steady voltage necessary to produce breakdown. The value of  $t_z$  was obtained by the method described in Refs.3, 9. Fig.3 gives the dependence of the time lag  $t_z$  on the breakdown field when the probability of breakdown is 90%. The results obtained indicate that all the 4 monocrystals studied have the same value of the breakdown field when the breakdown occurs within  $5-8 \times 10^{-9}$  sec (Fig.2). With increase of the overvoltage to 1.6 the time lag  $t_z$  falls sharply, but with further increase of the overvoltage, the value of  $t_z$  falls more slowly (Fig.3). This behaviour is similar to that observed in gases. The time lag  $t_z$  in gases is the sum of 2 parts:  $t_{st}$  which is the statistical time lag and the formation time  $t_f$ . Both these components of  $t_z$  decrease with increase of the overvoltage, but  $t_{st}$

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Investigation of the Pulse Breakdown of Monocrystals of Certain Alkali-Halide Salts and of Polymethylmethacrylate in the Millimicro-second Region

falls down to a certain limiting value. Fig.3 shows that for the same overvoltage the time lag of all the 4 monocrystals increases with decrease of the crystal lattice energy. Fig.4 shows that at the breakdown voltages equal or larger than 1800 kV/cm the time lag is almost the same for all the 4 salts. The results given in Figs.2-4 are consistent with the existence of a statistical time lag in the cases when breakdown occurs within  $5-8 \times 10^{-9}$  sec. Fig.5 gives the dependence of the breakdown field on time for polymethylmethacrylate. The breakdown strength increases from 6000 kV/cm to 8400 kV/cm when the breakdowns occur within  $5-6 \times 10^{-9}$  sec. For durations of application of the field  $> 9 \times 10^{-9}$  sec the breakdown field is practically independent of the duration of application of the field. The author's results on polymethylmethacrylate agree with those reported by others for amorphous dielectrics and polymers (Refs.7, 8, 14-16). The time lag at the over-

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Investigation of the Pulse Breakdown of Monocrystals of Certain Alkali-Halide Salts and of Polymethylmethacrylate in the Millimicro-second Region

voltage of 1.4 was  $1.2 \times 10^{-9}$  sec and the rate of development of the discharge was of the order of  $3 \times 10^6$  cm/sec, calculated by the method given by Refs.3, 9. The mechanical stresses in polymethylmethacrylate during a breakdown were of the order of 30-75 kg/cm<sup>2</sup>. Such stresses are insufficient for mechanical breakdown by electrostatic field forces. The author consequently suggests that the breakdown mechanism in polymethylmethacrylate is an electronic one. The author thanks Professor A. A. Vorob'yev who directed this work and G. A. Vorob'yev for his advice. There are 5 figures and 16 references, 10 of which are Soviet, 4 English, 1 German and 1 Dutch.

ASSOCIATION: Tomskiy politekhnicheskii institut imeni S. M. Kirova  
(Tomsk Polytechnical Institute imeni S. M. Kirov)

SUBMITTED: February 25, 1958.

Card 4/4

SOV/139-58-6-29/29

AUTHOR: Mel'nikov, M. A.

TITLE: The Effect of Annealing on the Electric Strength of Rock-Salt and Potassium Bromide Crystals (Vliyaniye otzhiga na elektricheskuyu prochnost' kristallov kamennoy soli i bromistogo kaliya)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1958, Nr 6, pp 173-174 (USSR)

ABSTRACT: This paper was presented at the Conference of Higher Teaching Establishments on Dielectrics and Semiconductors, Tomsk, February, 1958. The author obtained volt-second characteristics (breakdown field plotted against duration of application of the voltage) for annealed and non-annealed crystals of NaCl and KBr in a uniform field (Figs 1, 2). The minimum of the electric impulse strength of annealed samples of both salts is displaced towards longer times ( $1.5 \times 10^{-5}$  sec) by about one order, compared with non-annealed samples. The minimum value of the electric strength (for breakdown probability  $\psi = 90\%$ ) of annealed and non-annealed samples of NaCl is the same and for

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The Effect of Annealing on the Electric Strength of Rock-Salt and Potassium Bromide Crystals

lower than that of non-annealed specimens. Increase of the electric strength for durations of application of the voltage shorter than that which corresponds to the electric strength minimum is due to a delay in the breakdown discharge (Refs 3,4). Increase of the pulse strength when the duration of application of the external voltage is longer than the value at the minimum electric strength is due to space charge (Refs 1-6). In annealed samples of both salts the increase of the electric strength due to space charge occurs at voltage applications of  $2.5 \times 10^{-4}$  sec duration, i.e. at durations longer than for non-annealed samples ( $5 \times 10^{-5}$  sec for NaCl and  $2.5 \times 10^{-5}$  sec for KBr). It is possible that in annealed samples of both salts the tearing away of ions from their positions is more difficult and, therefore, space charge forms more slowly. The results obtained confirm the suggestion (Refs 2-5) on the ionic nature of space charge in crystals of alkali-halide salts. The author thanks Candidate of Technical Sciences G. A. Vorob'yev for his help.

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SOV/139-58-6-29/29

The Effect of Annealing on the Electric Strength of Rock-Salt and Potassium Bromide Crystals

There are 2 figures and 6 references, 5 of which are Soviet and 1 English.

(Note: This is a complete translation except for the abstract and figure captions).

ASSOCIATION: Tomskiy politekhnicheskiy institut imeni S.M.Kirova  
(Tomsk Polytechnical Institute imeni S. M. Kirov)

SUBMITTED: March 31, 1958

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USCOMM-DC-60809

Mel'nikov M.A.

AUTHOR: Kuchin, V. D., Candidate of Technical Sciences SOV/105-58-7-24/52

TITLE: Conference on Solid Dielectrics and Semiconductors (Konferentsiya po tverdyim dielektrikam i poluprovodnikam.n)

PERIODICAL: Elektrichestvo, 1958, Nr 7. pp. 85 - 85 (USSR)

ABSTRACT: The conference took place from February 5<sup>rd</sup> to February 8<sup>th</sup>, 1958, in the Tomsk Polytechnical Institute, Section of Breakdown of Solid Dielectrics and Semiconductors. I.Ye.Balygin, Candidate of Technical Sciences (Leningrad), reported that from the calculation data of the resistance of the discharge channel and on the basis of the obtained oscillographs he could draw final conclusions concerning the dynamics of the development and the physical nature of the breakdown of titanium-containing ceramic material with  $\epsilon=20$ . G.A.Vorob'yev (TPI), Candidate of Technical Sciences (TPI) constructed an oscillograph with pulse feeding. This oscillograph permits the reliable registration of phenomena of a duration of  $10^{-9}$  sec. M.A.Mel'nikov (TPI) found that the electric strength and the time of lagging of the discharge in

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Conference on Solid Dielectrics and Semiconductors

SOV/105-58-7-24/32

the breakdown of NaCl-, KCl-, KBr-, KJ crystals and methylmethacrylate crystals with pulses of a front length of  $(5 - 7) \cdot 10^{-9}$  sec are almost independent of the chemical composition. A.V. Astafurov (TPI) reported on voltage vs. time characteristics and the dependence of the breakdown voltage on the thickness in the electric breakdown of solid dielectrics of considerable thickness (2 - 34 mm). The applicability of the empiric formula of Gorev-Mashkilevson for the latter is shown. G.A. Andreyev (TPI) found by means of the double-ray oscillograph that the temperature dependence of the electrical strength on NaCl, KCl and KBr has a maximum in the case of a breakdown due to thermal instability in the range of room temperatures. V.D. Kuchin (TPI) found, proceeding from the single electron model, the dependence of the electrical strength on the temperature in the following form:  $F^*(T) = kT/2e\lambda(T)$ , where  $\lambda$  denotes the free length of path of the electron. K.K. Sonchik (TPI) found that the time of lagging of the discharge in the ion crystals is the shorter, the higher the excess voltage at the sample and the crystal lattice energy are. M.P. Tonkonogov and Ye. T. Nadirov (Karaganda Mining Institute) investigated the destruction of coal by an electrohydraulic shock.

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The calculation showed that the discharge channel formed in the breakdown of the water is the source of the shock wave which destroys the coal. V.I.Obukhov (TPI) showed that the introduction of 0 - 10% solid powdery dielectrics into transformer oil, castor oil, glycerin, and distilled water influences to a very small extent the amount of the resistivity to electric pulses. The strength of the systems is to a great extent increased in the case of a content of admixtures of 30%.

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnical Institute)

1. Dielectrics--USSR 2. Semiconductors--USSR 3. Conferences

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MEL'NIKOV, M. A., Cand Tech Sci (diss) -- "Investigation of impulse arcing and the development of discharge in solid dielectrics". Tomsk, 1959. 18 pp  
(Min Higher and Inter Spec Educ USSR, Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov), 150 copies (KI, No 10, 1960, 131)

5-59-2-15/25

8(3)

AUTHOR: Mel'nikov, M. A., Engineer

TITLE: A Study of Pulse Breakdown of Several Polymers and Micas  
(Issledovaniye impul'snogo proboya nekotorykh polimerov i slyudy)

PERIODICAL: Elektrichestvo, 1959, Nr 2, pp 64-66 (USSR)

ABSTRACT: The dependence of the electric strength on the duration of voltage effect on the technical polystyrene, styroflex (polystyrene film), fluoroplast-4 (as film and as sheet), organic glass and laminated muscovite mica was examined. The samples were exposed to voltage for  $5 \cdot 10^{-9}$  to  $10^{-6}$  sec. Similarly the dependence of the electric strength of the laminated fluoroplast-4 on the width at an exposure to voltage for  $5 \cdot 10^{-9}$  sec was studied. The electrodes were applied by evaporation of tin in vacuum. A cathode-ray oscillograph was used for recording single impulses with an impulse feed tube 13 LO 2S. The impulse feeding circuit was developed by G. A. Vorob'yev and built in cooperation with the author (Ref 6). Basing upon the tests the following considerations are made. A smaller number of ionization processes is assumed to take place per unit length of path in the ion crystals and the "linear ioniza-

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SOV/105-59-2-15/25

A Study of Pulse Breakdown of Several Polymers and Micas

tion density" is assumed small. Hence many avalanches will be required to build a highly conductive channel. In complicated bodies it is more difficult to get the electron accelerated but the "linear ionization density" will be greater and less avalanches will be required for building a highly conductive channel. Therefore, the time for preparing the discharge in the polymers and in mica is smaller than in the crystals of the alkaline-halide salts. At the conditions prevailing at these tests the increase of the ionization density plays an important part at the breakdown of polymers and mica, for large values of field strength (2 to 10 MV/cm), during the formation process of the discharge. At the presence of a sufficiently high ionization density the formation of the discharge can begin in some points of the discharge path and the time of discharge formation will be shortened. The reduction of the discharge delay for higher breakdown field strengths confirms indirectly this hypothesis. Calculating the mechanical stresses in the dielectric during the breakdown (according to the formula of reference 13) gives values lying below the mechanical strength corresponding to the data of the article (Ref 14). In accordance with the experimental results it is assumed that the breakdown in the

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507, 105-59-2-15/25

A Study of Pulse Breakdown of Several Polymers and Micas

examined dielectrics is caused by collision ionization. There are 4 figures, 2 tables, and 14 references, 12 of which are Soviet.

SUBMITTED: October 8, 1958

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MEL'NIKOV, M. A.

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SOV/143-59-4-6/20

AUTHORS: Vorob'yev, A.A., Doctor of Physico-Mathematical Sciences, Professor; Vorob'yev, G.A., and Mel'nikov, M.A.

TITLE: Formation of Discharge in Solid Dielectrics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 4, pp 35-37 (USSR)

ABSTRACT: The article deals with the dependency of the electric puncture strength on the duration of the effect of the voltage in alkaline salts (NaCl, KCl, KBr and KJ), halite, muscovite, and some synthetic materials used for insulation purposes (styroflex, polystyrene, teflon, and plexiglass). The duration of the effect of the voltage was between  $10^{-6}$  and  $10^{-9}$  sec. The result of the test is given in tables and graphs. It was found that the electric puncture strength decreased with the duration of the effect of the voltage up to a certain point and then either started to rise again to a small extent (halite) or remained constant (synthetic materials, muscovite). The monocrystals of the alkaline salts showed a constant fall of the electric

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Formation of Discharge in Solid Dielectrics

puncture strength, if the effect of the voltage was extended. The authors explain this phenomenon with formation processes in the dielectric and supply a physical explanation of its mechanism. There are 2 graphs, 2 tables and 4 Soviet references.

ASSOCIATION: Tomskiy ordena Trudovogo Krasnovogo Znameni politekhnicheskoy institut imeni S.M. Kirova (Tomsk Polytechnical Institute of the Order of the "Red Banner of Labor" imeni S.M. Kirov)

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Card 2/2

MEL'NIKOV, M.A.

Effect of annealing on the electric strength of rock salt and potassium bromide crystals. Izv.vys.ucheb.zav.; fiz. no.6:173-174 '59. (MIRA 12:4)

1. Tomskiy politekhnicheskii institut im. S.M. Kirova.  
(Rock salt--Electric properties)  
(Potassium bromide--Electric properties)

66197

SOV/143-59-7-7/20

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AUTHORS: Barchenko, T.N., Mel'nikov, M.A., Engineers

TITLE: An Investigation of the Discharge Propagation Velocity in Alkaline-Haloide Salt Crystals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1959, Nr 7, pp 43-49 (USSR)

ABSTRACT: The authors investigated the puncturing process of solid dielectrics by impact ionization with electrons. They obtained the dependence of velocity and direction of the path of the discharge on the polarity of the electrode spike. As shown by A.W. Walter (A.F. Val'ter) (Ref.2), in the presence of such a dependence it will be hardly possible that the puncturing process occurs as a destruction of the dielectric by the electric field. This dependence provides the possibility of an impact ionization in the dielectrics investigated by the authors. The assumption of the impact ionization by electrons in dielectrics (NaCl, KCl) is in agreement with the author's experimental data of the discharge propagation speed in dielectrics of different chemical composition. ✓

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An Investigation of the Discharge Propagation Velocity in Alkaline-Haloide Salt Crystals

tion. The authors mention the Laboratoriya gazovogo razryada EI AN SSSR (Gas Discharge Laboratory of EI AS USSR) in which the propagation speed of discharges in air is investigated during different phases. The authors used rectangular pulses with a front of  $1 \cdot 10^{-8}$  sec and an amplitude of 48 kv for their experiments. Some results of their experiments are compiled in five graphs (Figs. 2, 3, 5, 6 and 7). They express their gratitude to professor A.A. Vorob'yev for the scientific guidance. This paper was presented at a seminar on physics of dielectrics of the departments of physics, high-voltage engineering, electrical insulation and cable engineering. There are 5 photographs, 5 graphs, 1 table and 19 references, 11 of which are Soviet, 4 English and 4 German.

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ASSOCIATION: Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S.M. Kirova (Tomsk - Red Labor Banner Order - Polytechnic Institute imeni S.M. Kirov)

SUBMITTED: March 18, 1959

307,56-36-2-40,13

24(3)

AUTHOR:

Mel'nikov, M. A.

TITLE:

On the Statistical Retardation of Discharge in NaCl and KBr (O statisticheskoy zapazdyvaniy razryada v NaCl i KBr)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1990,  
Vol 36, Nr 2, pp 613 - 614 (USSR)

ABSTRACT:

The author first discusses some previous papers concerning this subject. He developed a method for the production and recording of high voltage pulses (up to 27 kv) of  $10^{-9}$  sec front length by means of an electron oscillograph with pulse feeding. The author endeavored to estimate the statistical retardation time  $t_{st}$  in crystals of NaCl and KBr. A part of the investigated samples was previously irradiated by X-rays (and exposed to light during the breakdown) and the other samples were not irradiated. A diagram shows the time dependence of the breakdown voltage  $E_{br}$  for samples of NaCl and KBr irradiated and not irradiated by X-rays. A table gives the values of  $E_{br}$  (for the breakdown probability  $\phi=90\%$ )

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On the Statistical Retardation of Discharge in NaCl  
and KBr

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the retardation of the discharge  $t_{ret}$ , the decrease  $\Delta E_{br}$  of the breakdown voltage and the discharge retardation time  $\Delta t_{ret}$  of irradiated samples with respect to nonirradiated samples. The author then discusses the possible errors of the above-discussed experiments. The error of the pulse amplitude amounts to 3%. The difference between the values of  $E_{br}$  and  $t_{ret}$  of irradiated and non-irradiated samples is greater than the experimental errors and, therefore, indicates the existence of a statistical retardation of the discharge in the non-irradiated samples of NaCl and KBr. The author thanks Professor A. A. Vorob'yev, for supervising the present study. There are 1 figure, 2 tables, and 8 references, 6 of which are Soviet.

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnic Institute)  
SUBMITTED: June 9, 1958, (initially) and November 10, 1958, (after revision)

Card 2/2

Stalks dielektrikov, truly vtoroy vostoynoy konferentsii (Physics of Dielectrics, Transactions of the 2nd All-Union Conference on the Physics of Dielectrics) Moscow, Izdat. AN SSSR, 1960. 522 p. Errata slip inserted. 5,000 copies printed.

**Sponsoring Agency:** Akademiya nauk SSSR, Fizicheskii Institut imeni P. N. Lebedeva, Ed. of Publishing House, Ye. L. Starostin'skaya, Tech. Ed.: I. N. Dorokhina, Editorial Board: (Resp. Ed.): G. I. Skatov, Doctor of Physics and Mathematics (Deceased), and A. P. Filippova, Candidate of Physics and Mathematics.

purpose. This collection of reports is intended for scientists investigating the physics of dielectrics.

**OUTLOOK.** The Second All-Union Conference on the Physics of Dielectrics held in Moscow on the first half of 1958. The Academy of Sciences Institute of Metal Physics, Leningrad, was represented by representatives of the principal scientific establishments of the USSR and of several other countries. This collection contains most of the reports presented at the conference and summaries of the discussions which followed. The reports in this collection deal with dielectric properties, losses, and polarization, and with specific features of capacitors, insulators, chemical compounds, and ceramics. Photographs of ferroelectric crystals and various radiation and irradiation effects on dielectric properties. The volume contains a list of other papers presented at the conference dealing with polarization, losses, and breakdowns of dielectrics which were published in the journal *Izv. AN SSSR, Seriya Fizicheskaya* for 1958. No personalities are mentioned. References accompany each report.

Prizkin, V.M. "Development and Investigation of Certain Dielectric Possessing a High Electrophotographic Sensitivity [Institute of Crystallography, USSR, Moscow]"

04060313A

Diolovskiy, V.I., M.M. Vershargikh, and L.M. Pod'ko. Effect of Heat Treatment on the Electrophysical Properties of Certain Alkali-Free Silicate Glasses

Ioffe, V. A., and I. S. Yanchevskaya. Dielectric Properties of Certain Crystalline Aluminosilicates [Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR)]

Rudionova, N.A. Effect of the Sorption Shape of the Water Bond on the Electrical Properties of Organic Dielectrics

K. Radionova, N.A. Dielectric Losses in  $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$

Kopitsk, V.A. Piezoelectric Properties of Calcite Crystals (Physically Faculty of Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova (Physics Division, Moscow State University named M.V. Lomonosov))

**Occupation**

Boys, G.V., and M.I. Heyman. Electrical and Mechanical Properties of Low Polycrystal Dielectrics in Connection With Their Heat Treatment

Levko, S.M., and A.M. Tsikin. Third Kind of Thermal Breakdown (Leningrad-  
sky politekhnicheskii institut im. M.I. Kalinina (Leningrad Polytechnical  
Institute named M.I. Kalinin))

Terob'yev A.A., and K.S. Sosnchik. Some Regularities of Discharge Delaya in Solid Dielectrics (family politimkhneshkiy institut iz S.M. Kirova (Coast Polytechnical Institute Izumi S.M. Kirov))

Bergshchik, I.S., and M.A. Polukhin. On the Possibility of a Stress Discharge Mechanism in Solid Dielectrics (Coast Polytechnical Institute Izumi S.M. Kirov)

Med'nikov, M.A. Investigation of the Pulse Structure of Certain Polymers and Mice [Tomsk Polytechnical Institute Issled. S.M. Kirov]

Balygin, I. Ye. On Certain Post-Puncture Processes in Liquid Dielectrics

Balygin, I.Ye. Investigation of Discharge Dynamics in Distilled Water

**DIRECTOR**

Full H.M., and S.V. Bogdanov. Effect of Unilateral External Pressure on Domain Orientation in "Polarized" Polycrystal BaTiO<sub>3</sub> [Physics Institute, Lenin P.N. Lebedev, AS USSR, Moscow]

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MEZLIKU, M.A